



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,686	07/24/2001	Yuji Yamada	7217/64962	3968

7590 11/17/2004

COOPER & DUNHAM LLP
1185 Avenue of the Americas
New York, NY 10036

EXAMINER

PENDLETON, BRIAN T

ART UNIT	PAPER NUMBER
----------	--------------

2644

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/911,686

Applicant(s)

YAMADA ET AL.

Examiner

Brian T. Pendleton

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-26 and 32 is/are allowed.
- 6) ☒ Claim(s) 1,5-12,14,27 and 31 is/are rejected.
- 7) ☒ Claim(s) 2-4,13 and 28-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Inanaga et al, US Patent 5,696,831. In figure 2, Inanaga et al disclose an audio reproducing apparatus comprising convolutional integrators 5, 7, 9, 11 which are part of audio processing unit 1 (which I deem the digital signal processing means), A/D converter 33 for converting analog detection signals from sensor 38, control means 35, 50-53 for correcting the signals from the integrators based on the movement of the user's head sensed by the sensor 38. The A/D converter 33 is comprised within the digital processing means 1. Claim 1 is met. Per claim 7, the vibratory gyroscope 71 is piezoelectric.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6, 10, 11, 14, 27, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inanaga in view of Gardner, US Patent 6,243,476. Inanaga does not disclose that the audio reproducing apparatus outputs the control signal from the memory 35 to external equipment. Gardner discloses a system comprising binaural synthesis unit 100, crosstalk cancellation unit

Art Unit: 2644

110 and head tracker 125. The head tracker supplies a control signal to both units 100 and 110. It would have been obvious to one of ordinary skill in the art at the time of invention to supply the control signal from memory 35 to external equipment, as taught by Gardner, for the purpose of controlling a plurality of audio signal processors that respond to changes in head orientation, thereby increasing the realism of the system, meeting claims 5 and 27. Per claim 6, Inanaga does not specify that output signals of the A/D converter can be output to external equipment as digital detection signals. Inanaga discloses an A/D converter 33 that outputs digital detection signals. As stated above, it was obvious to send digital detection signals of the head movements of an user to other signal processing systems. As to claims 10, 11 and 31, the sensor of Inanaga calculates angular velocity whereby both angle data and displacement data are determined. As to claim 14, the period is a continuous period.

Claims 8, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inanaga. Inanaga does not disclose that the sensor is a geomagnetic direction or inclination sensor. Official Notice is taken that the use and benefits of the abovementioned sensors were well known in the art at the time of invention to one of ordinary skill. One would have been motivated to use those sensors for the purpose of generating an accurate estimation of head tilt. Per claim 12, it was obvious to extend the system for a plurality of users by incorporating a plurality of A/D converters, sensors and processors for the purpose of providing a multi-user environment.

Allowable Subject Matter

Claims 15-26 and 32 are allowed.

Art Unit: 2644

Claims 2-4, 13, 28-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



btp